

Summary Points

- Arkansas students continue to show growth on the Arkansas Benchmark exams with 81% scoring at the proficient or advanced level in literacy and 78% in math. These scores represent a six percentage point and one percentage point gain, respectively, over the previous year.
- Lower grades (3-5), on average, have more students scoring at the proficient or advanced level as compared to the upper grades (6-8), particularly on the math and science Benchmark exams.
- Student performance on the norm-referenced Iowa Tests of Basic Skills (ITBS) was characterized by across-the-board gains in national percentile rank compared with the prior year.
- Regionally, Northwest Arkansas (Region 1) continues to outscore the remainder of the state on ALL statewide exams.
- Full databases with state- and district-level scores are available on the OEP Arkansas Data webpage: <http://www.uark.edu/ua/oep/resources.html>

2011-12 Arkansas Test Results

On Monday, July 30, the Arkansas Department of Education (ADE) released the 2011-2012 test score results. The following brief will highlight the results of these tests, compare achievement scores over time, and provide a glimpse of regional achievement results for the following exams:

- Benchmark Exam (Grades 3-8)*
- End-of-Course Exam (Algebra I, Geometry, Biology, and Grade 11 Literacy).*
- Iowa Test of Basic Skills (Grades 1-9)*

Academic Snapshots

Benchmark Performance: Statewide
The Arkansas Benchmark exam is administered to students in grades 3-8 each spring in Arkansas. This criterion-referenced test (CRT) measures knowledge proficiency according to the Arkansas curricular standards.

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Students in Arkansas continue to show improved performance on the Benchmark exam compared with previous administrations. The results of this administration show that 81% of Arkansas 3rd-8th grade students scored at the proficient or advanced level (P/A) in literacy, and 78% scored similarly in math (see Figure 1 below). There was a surprisingly large jump in literacy performance on this administration (a six-percentage point gain from 75% in 2010-11) as compared to the one-percentage point increase in math from last year's Benchmark exam administration. Although we see similarly large gains over time in literacy and math, these gains have occurred over several years. As performance nears the ceiling of possible scoring (100%), we would expect large gains to be more difficult to achieve. Perhaps a further inquiry into the 2011-12 literacy performance is warranted.

Figure 1: Percent Proficient And Advanced on the Benchmark Exam, Selected Years

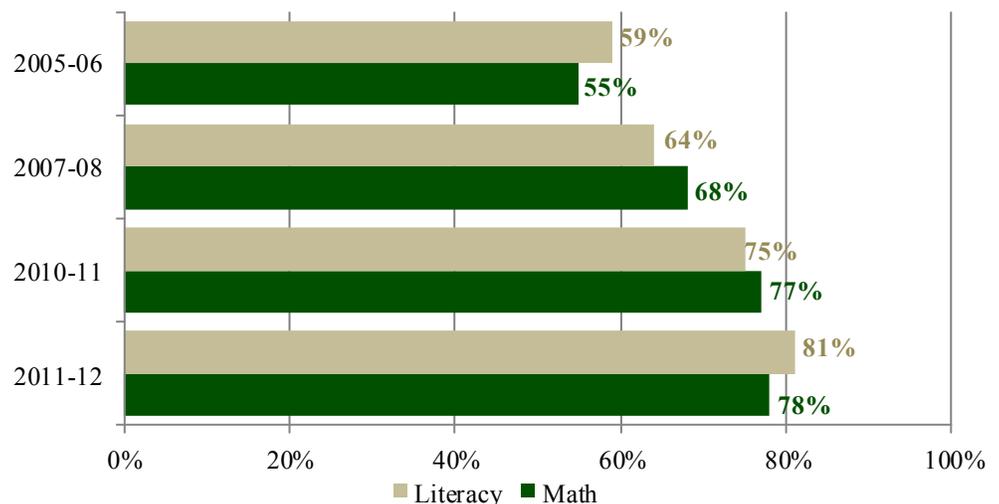


Table 1: Student Demographic Characteristics, 2011-2012 by Region

| | Enrollment | % Minority | % FRL | Poverty Index |
|----------------------------|----------------|------------|------------|---------------|
| Arkansas Overall | 468,000 | 35% | 60% | 110% |
| Region 1: Northwest | 161,946 | 29% | 57% | 103% |
| Region 2: Northeast | 95,423 | 28% | 64% | 117% |
| Region 3: Central | 137,305 | 43% | 56% | 102% |
| Region 4: Southwest | 46,857 | 43% | 67% | 124% |
| Region 5: Southeast | 26,469 | 52% | 72% | 136% |

Figure 2: Literacy Benchmark Exam, Percent Proficient and Advanced, by Region 2005-06 & 2011-12

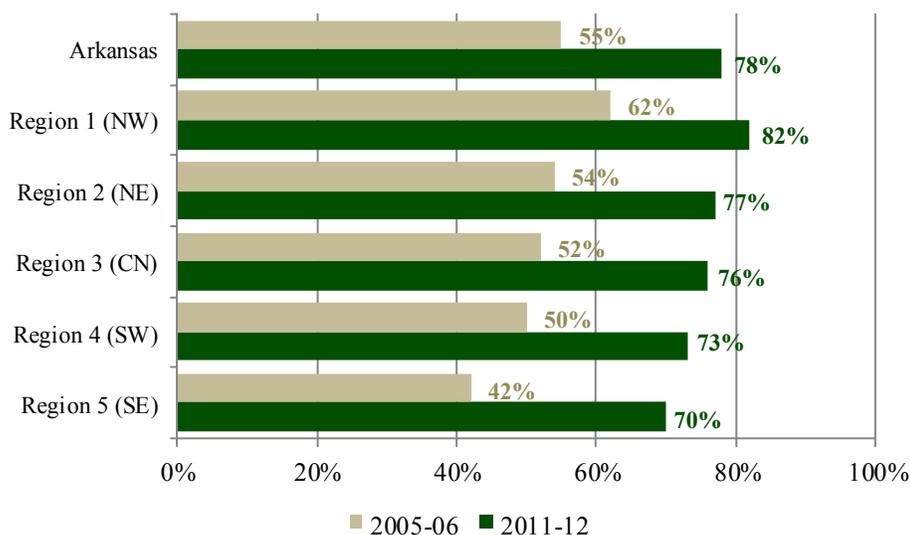
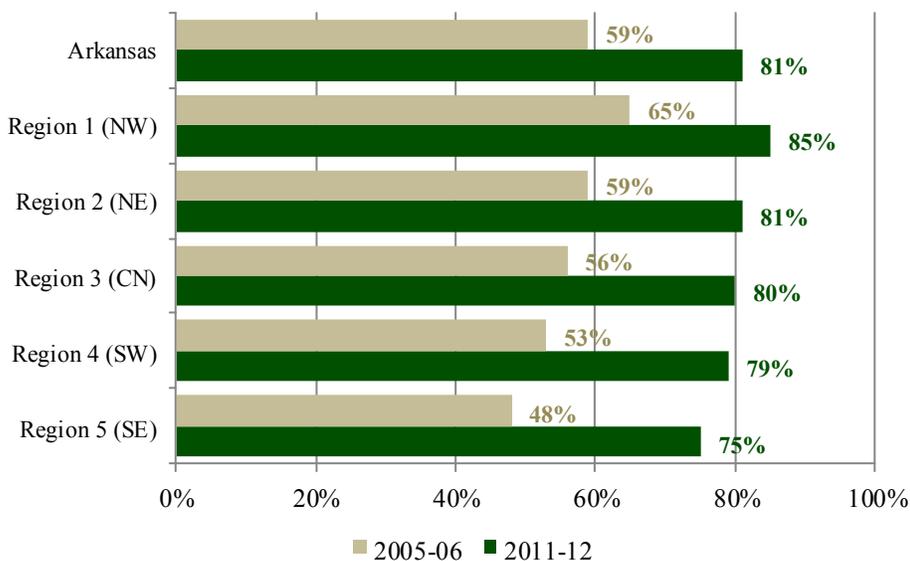


Figure 3: Math Benchmark Exam, Percent Proficient and Advanced, by Region 2005-06 & 2011-12

**Benchmark Performance: Regional**

In this section, we examine student performance on the Benchmark exam by region. The ADE divides schools and districts into the following five regional categories:

- **Region 1:** Northwest (NW)
- **Region 2:** Northeast (NE)
- **Region 3:** Central (CN)
- **Region 4:** Southwest (SW)
- **Region 5:** Southeast (SE)

Demographic characteristics about each region can be found in Table 1. The highest concentration of students is found in the Northwest and Central regions. Further, we see the lowest levels of poverty among these two regions, as measured by the percentage of students receiving a free or reduce-priced lunch (FRL). Conversely, we see the smallest enrollment, and highest concentration of minority and FRL students in the Southwest and Southeast (Arkansas delta) regions.

Given the region's relative affluence, it is not surprising that Northwest Arkansas (Region 1) has continuously has the highest percent of students scoring proficient and advanced in literacy and math across the state. However, it is important to note that the delta Southeast has seen the largest gains in students scoring at the proficient or advanced levels on both the math and literacy Benchmark exams (gains of at least 27 percentage points in both subjects) over a six year period from 2005-06 through the current year.

In fact, all regions, and the state as a whole have made substantial increases in the percent of students scoring proficient or advanced on the Benchmark exams in math and literacy (at least 20 percentage points in each subject) over the same time period. This indicates our students are consistently improving in knowledge and skills reflected in the Arkansas state curricular standards.

Benchmark Grade-Level Summaries: Grade level summaries of Benchmark exam performance are presented in Table 2 below. On average, we see lower percentages of students scoring at the proficient or advanced level in the upper grades (6-8). In addition, science scores are also included here. These results indicate that drops in scores were more pronounced for older students in science and math Benchmark subtests.

Table 2: Summary of Grade-level Performance on the Arkansas Benchmark Exam, 2011-12

| Grade | Math Total | | Literacy Total | | Science Total | |
|-------|------------|--------------|----------------|--------------|---------------|--------------|
| | # Tested | % Prof./Adv. | # Tested | % Prof./Adv. | # Tested | % Prof./Adv. |
| 3 | 35,689 | 86% | 35,689 | 81% | | |
| 4 | 35,913 | 82% | 35,913 | 85% | | |
| 5 | 36,035 | 74% | 36,035 | 85% | 36,035 | 60% |
| 6 | 35,809 | 75% | 35,809 | 75% | | |
| 7 | 35,871 | 76% | 35,871 | 79% | 35,871 | 39% |
| 8 | 35,304 | 67% | 35,304 | 80% | | |

End of Course Exam Performance: Statewide

Students in Arkansas taking courses in Algebra, Geometry, Biology are also required to take an End-of-Course (EOC) exams at the close of the semester/year they take the course. In addition, all students are required to take a Literacy EOC exam in 11th grade. The following section highlights Arkansas performance on the EOC exams for 2011-12.

The greatest gains in EOC Exam performance were seen on the **Algebra EOC** (up seven percentage points to 85% percent scoring P/A from the prior year) and, like the literacy scores on the Benchmark exam, student performance on the **Grade 11 Literacy EOC** grew by 8 percentage points to 68% P/A over the prior year (see Figure 4).

On the **Geometry EOC**, student performance continued a positive trend, but scores only grew by 2 percentage points from last year to 75% P/A.

Performance on the **Biology EOC** exam continues to lag behind the other EOC exams as has been the case in previous years. We also see the smallest gain (1 percent) of students scoring proficient or advanced over the previous test administration. (See Figure 4).

End of Course Exam Performance: Regional

Regional trends on the EOC Exams mirror those observed on the Benchmark exams with the highest percentage of students scoring at the proficient or advanced level concentrated in Northwest Arkansas (Region 1). We also see in ALL regions that the Algebra EOC exam had more students scoring at the P/A level followed by Geometry, then by Grade 11 Literacy and finally by Biology (see Table 3 above). This may be because the Biology EOC exam is the “newest” of the EOC exams, and teachers and students are still acclimating to the test.

Figure 4: EOC Exams, Percent Scoring Proficient or Advanced, Selected Years

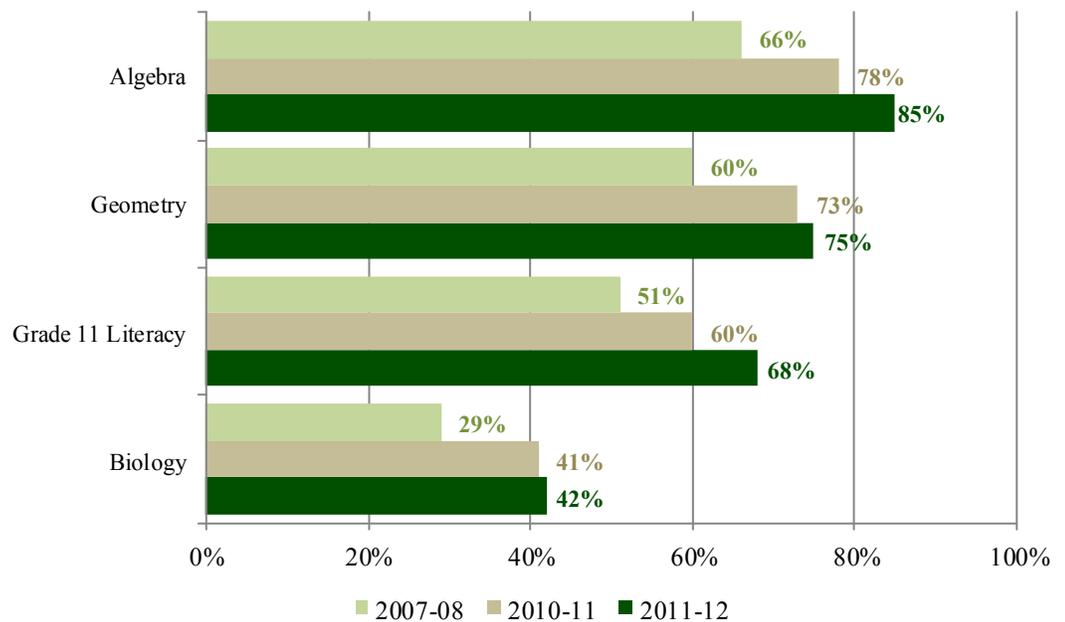


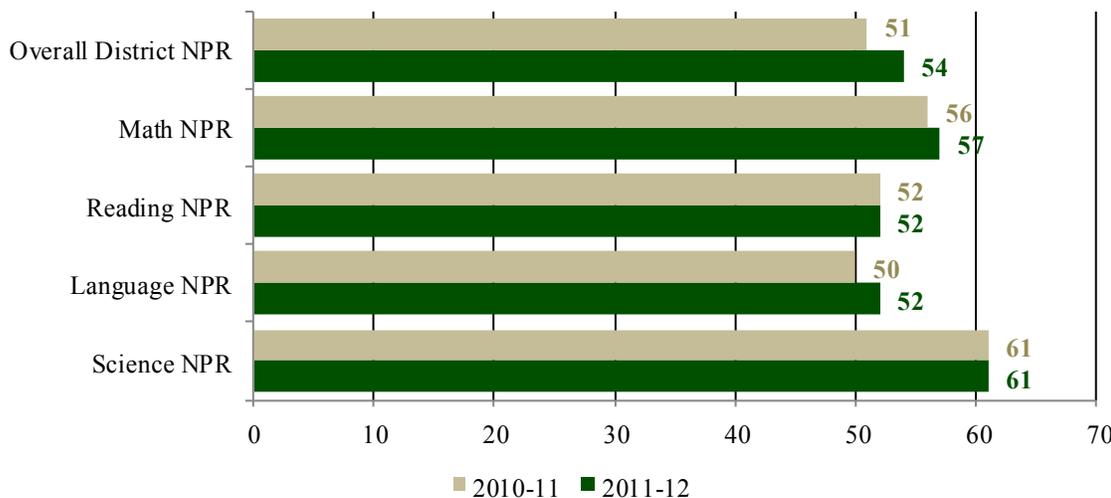
Table 3: EOC Exams, Percent Scoring Proficient or Advanced, by Region, 2011-12

| | Algebra | Geometry | Grade 11 Literacy | Biology |
|-----------------|------------|------------|-------------------|------------|
| Arkansas | 81% | 75% | 68% | 42% |
| Region 1 (NW) | 85% | 81% | 75% | 51% |
| Region 2 (NE) | 78% | 76% | 65% | 39% |
| Region 3 (CN) | 77% | 72% | 69% | 40% |
| Region 4 (SW) | 73% | 67% | 61% | 34% |
| Region 5 (SE) | 73% | 69% | 54% | 30% |

Iowa Test of Basic Skills Performance: Statewide

The Iowa Test of Basic Skills (ITBS) is a nationally norm-referenced test (NRT) that is administered in tandem with the Arkansas Benchmark test as part of the “Augmented Benchmark exam.” In 2011-12, the ITBS was administered to students in grades 1-9 (though only scores from grades 3-8 are used in the Augmented Benchmark). This is the second year Arkansas has used the ITBS as an NRT in recent years. Since the ITBS as a nationally normed test, results are reported in National Percentile Ranks (NPR) in each subject area. This measures Arkansas’ student performance against that of other states that also administer the ITBS. As shown in Figure 5, 2011-12 scores in all areas did not change or increased slightly from 2010-11. Overall, Arkansas students had a higher science percentile rank in comparison to the other subjects. This is interesting considering the relatively poor performance in grades 5 and 7 on the Benchmark science exam, and the relatively poor performance on the Biology EOC Exam.

Figure 5: National Percentile Rank on the Iowa Test of Basic Skills, 2010-11 through 2011-12¹



Iowa Test of Basic Skills Performance: Regional

Not surprisingly, the trend of performance on statewide exams being the highest in Northwest Arkansas (Region 1) does not change with ITBS performance. In fact, Northwest Arkansas is the only region in the state with higher percentile ranks than the overall state. Still, given the low statewide performance on the Benchmark science exam (in grades 5 and 7) and the Biology EOC exam, it is surprising to see Arkansas students scoring so well on the science portion of the ITBS.

Further, because we only have one year of “pre-data,” these NPR gains could be artificially inflated due to students’ increased familiarity with the exam. For example, prior to last year, Arkansas administered the Stanford Achievement Test, Tenth Edition (SAT-10), thus students would have not been familiar with the ITBS when they took it for the first time in 2010-11.

Table 3: National Percentile Rank on the Iowa Test of Basic Skills, 2011-12, by Region

| | Overall District NPR | Mathematics NPR | Reading NPR | Language NPR | Science NPR |
|-----------------|----------------------|-----------------|-------------|--------------|-------------|
| Arkansas | 54 | 57 | 52 | 52 | 61 |
| Region 1 (NW) | 58 | 61 | 56 | 55 | 68 |
| Region 2 (NE) | 53 | 55 | 51 | 51 | 60 |
| Region 3 (CN) | 53 | 55 | 51 | 50 | 59 |
| Region 4 (SW) | 50 | 53 | 48 | 49 | 56 |
| Region 5 (SE) | 46 | 49 | 43 | 45 | 49 |

¹ the ADE-reported ITBS scores from 2010-11 included grades K-9; however, in 2011-12, only data for grades 1-9 were reported. Thus in the comparisons between the two years in Figure 5 only include grades 1-9.

Iowa Test of Basic Skills (ITBS)

- The ITBS has been taken intermittently with the Stanford Achievement Test, Tenth Edition (SAT-10).
- Students in Arkansas first took the ITBS during the 2004-05 academic year and then again during 2010-11 and 2011-12.
- During the years the ITBS was not administered, Arkansas used the SAT-10 as the NRT portion of the Augmented Benchmark Exam.
- Because we only have one year of pre-year ITBS results for comparison, these gains should be interpreted with caution, as lack of familiarity with the test may have artificially decreased the previous year’s performance.

For More Information about this Policy Brief and other education issues in Arkansas contact us:

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Summary

Overall, **Arkansas' students continue to make progress on all statewide exams.**

There are many questions that can be asked in the coming months surrounding these scores. For example:

- What led to the increase in literacy Benchmark performance?
- Why did students score so well on the ITBS science subtest, but poorly on the Benchmark science and EOC Biology exams?
- Why do we not see similar performance among middle grades on the math and science Benchmark exam as we do in early grades?

It is also important to look at scores in the context of the regions and districts, thus we provided this information in this policy brief.

As we look to the future with the Common Core State Standards, it is important to note that the new system of testing (PARCC) will not be fully implemented until 2014-2015, so the Benchmark and EOC will remain in place until then. See our policy brief on the new testing system here:

http://www.uark.edu/ua/oep/policy_briefs/2011/8_3_PARCC_Assessments.pdf

The Common Core State Standards were implemented in K-2 during the 2011-2012 year; and the CCSS will be implemented in grades 3-8 this coming year. While there can be no conclusions about how the CCSS effect student achievement, we look to the future when there will be results.

We hope you find the information presented in the brief useful. However, we understand that you may wish to compare a school or district near you. To do so, please visit our OEP Arkansas Data page at <http://www.uark.edu/ua/oep/resources.html> or see our "Note on Sources" at the end of this document for more information on all of our databases.

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A Note on Sources:

All of the Tables and Figures presented above were created using original source data provided by the Arkansas Department of Education Testing Website found here:

http://www.arkansased.org/testing/test_scores.html

At the OEP, we have taken these raw grade-by-grade data and aggregated them into school- and district-level databases that allow the user to look at performance of the entire school, the entire district, by educational region, and statewide. Click on the following links to access these data by exam and aggregation level:

School- and District-level Benchmark Exam Databases:

<http://www.uark.edu/ua/oep/resources.html>

School- and District-level EOC Exam Databases:

<http://www.uark.edu/ua/oep/resourcesEOC.html>

School-and District-level Norm-referenced (ITBS & SAT-10) Databases:

<http://www.uark.edu/ua/oep/resourcesNRT.html>

Databases from the most recent administration (2011-12) were posted in conjunction with this policy brief; however, the websites above included databases spanning back to the 2004-05 academic year. We hope you will take advantage of these resources, and most importantly, contact our office at oep@uark.edu or (479) 575-3773 if you have any questions about these data.

Note: The original release of this policy brief (published August 2, 2012) contained incorrect figures resulting from incorrect ITBS 2010-11 data. After correcting this data issue with the 2010-11 ITBS data, the OEP re-posted an updated and correct version of this policy brief on August 24, 2012.